



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,328	01/22/2001	Stephen Ho	SUN-P5489-RJL	9364

22835 7590 06/28/2004

PARK, VAUGHAN & FLEMING LLP
508 SECOND STREET
SUITE 201
DAVIS, CA 95616

EXAMINER

NGUYEN, HANH N

ART UNIT	PAPER NUMBER
----------	--------------

2662

DATE MAILED: 06/28/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/767,328

Applicant(s)

HO, STEPHEN

Examiner

Hanh Nguyen

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Application filed on 1/22/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) Claims 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-11, 14, 15, 20 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Larson et al. (US Pat. No. 4,646,287).

In claims 1 and 8, Larson discloses a local office 102 (first end device) and toll office 104 (second end device) connected via digital transmission trunk 118 (digital bus). See col.4, lines 60-65. The local office 102 and toll office 104, each comprises a trunk controller 131 (digital bus monitor) which controls data transmitted and received into the digital trunk 118 via output port 1431 and input port 1430. During idle period, when packets are not available for transmission, an idle packet generator 1420 generates idle signal containing pseudo-random bits, inserts into the outgoing signal stream and provides to transmitter 1403 for transmitting the idle signal onto the digital trunk 118 (generating a pseudo data signal, and transmitting the pseudo data signal on the digital bus). See Abstract & Fig.4 & col.5, lines 5-25.

In claim 21, Larson discloses a packet switching system (a computer system) comprising local office 102 (end device) and toll office 104 (end device) connecting via a digital high speed trunk 118 (digital bus). See col.3, lines 50-55. The local office 102 and toll office 104, each comprises a trunk controller 131 (digital bus monitor) which controls data transmitted and received into the digital trunk 118 via output port 1431 and input port 1430. During idle period,

when packets are not available for transmission, an idle packet generator 1420 generates idle signal containing pseudo-random bits, inserts into the outgoing signal stream and provides to transmitter 1403 for transmitting the idle signal onto the digital trunk 118 (generating a pseudo data signal, and transmitting the pseudo data signal on the digital bus). See Abstract & Fig.4 & col.5, lines 5-25 & col.4, lines 60-65.

In claims 3, 4, 10 and 11, Larson discloses the idle packets 800 are transmitted continually and comprise repeating pattern flags (PN signal is a continually changing predetermined pattern sequence, see Fig.8).

In claims 2, 7, 9 and 15, Larson discloses the trunk controller generates and transmits idle signals only when there is no real information to be send on the trunk (see col.5, lines 5-12). In addition, Fig.5 shows that a command line 410b (a command) is activated to idle packet generator 1419 and transmitter 1403 ceases transmission of idle flags (abrupting pn signal data). Transmitter 1403 asserts a READY signal line 411a to indicate that it is ready to transmit a packet (when digital bus is needed to transmit real data). See col.8, lines 24-30.

In claims 6 and 14, Larson discloses an idle packet storage 402 that stores idle packet 800. the idle packet storage 402 is a FIFO memory (Pn data signal is stored in trash bin address). See col.7, lines 25-35.

In claim 20, Larson discloses in summary section, col.3, lines 2-7, that idle packet transmission help eliminate crosstalk on adjacent links (generating Pn data signal to minimize cross talk).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-19 are rejected under 35 USC 103(a) as being unpatentable over Larson et al. (US Pat. No. 4,646,287) in view of the Admitted prior Art.

In claims 16-19, Larson et al. does not disclose pulse distortion effect caused by temperature (claim 16); power supply effect on digital bus (claim 17); transmission line mismatch effect (claim 18). The admitted prior art discloses in page 2 that small effects comprising pulse distortion, transmission line effect, power effect. therefore, it would have been obvious to one ordinary skill in the art to implement the system of Larson et al. in order to reduce pulse distortion effect, transmission line effect, cross talk, power supply dissipate. The motivation is to keep the system bus active even when no real data is transmitting.

Claims 5 and 12 are rejected under 35 USC 103(a) as being unpatentable over Larson et al. (US Pat. No. 4,646,287).

In claims 5 and 12, Larson et al. does not disclose PN data signal to maintain substantially equal number of high and low transitions on the digital bus. It is a well-known skill in the art to recognize that transmitting idle packet on digital bus during a period that no real data is available keeps the number of high and low transitions equal because the bus is active.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chellali et al. (US pat. No. 6201830 B1) discloses Low Computation Idle Transmission Method for DSL modems.

Johnson et al. (US Pat. No. 5,960,036) discloses Apparatus and Method for Autoconfiguring a Communication System.

Parish et al. (US Pat. No. 6,425,009 B1) discloses Monitoring Redundant Control Buses to Provide a High Availability LAN for a Telecommunication Device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday from 8AM to 5PM. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on 703 306-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/767,328

Page 6

Art Unit: 2662

Hanh Nguyen

A handwritten signature in black ink, appearing to read 'H. Nguyen', written over the printed name and date.

June 24, 2004